

REQUEST FOR QUOTATION (THIS IS NOT AN ORDER)			THIS RFQ <input type="checkbox"/> IS <input checked="" type="checkbox"/> IS NOT A SMALL BUSINESS SET-ASIDE		PAGE 1 OF 10 PAGES	
1. REQUEST NO. N65540-05-Q-0022		2. DATE ISSUED 04 NOV 16		3. REQUISITION/PURCHASE REQUEST NO. 91110 42543416		4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1
5a. ISSUED BY CONTRACTING OFFICER NSWC CARDEROCK DIVISION				6. DELIVER BY (Date) 05 JAN 13		
5b. FOR INFORMATION CALL (NO COLLECT CALLS)				7. DELIVERY <input checked="" type="checkbox"/> FOB DESTINATION <input type="checkbox"/> OTHER (See Schedule)		
NAME 5001 S. BROAD STREET, CODE 335 PHILADELPHIA, PA 19112-1403 ELIZABETH RAINEY		TELEPHONE NUMBER AREA CODE NUMBER 215 897-7061 FAX: 215 897-7059		9. DESTINATION N65540		
8. TO: a. NAME b. COMPANY				a. NAME OF CONSIGNEE NAVAL BUSINESS CENTER RECEIVING OFFICER, FISC, NSWC CARDEROCK DIVISION		
c. STREET ADDRESS				b. STREET ADDRESS 1601 LANGLEY AVENUE BLDG 542 E		
d. CITY				c. CITY PHILA.		
e. STATE		f. ZIP CODE		d. STATE PA		e. ZIP CODE 19112-5051
10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE IN BLOCK 5A ON OR BEFORE CLOSE OF BUSINESS (Date) 04 NOV 30			IMPORTANT: This is a request for information and quotations furnished are not offers. If you are unable to quote, please so indicate on this form and return it to the address in Block 5A. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotations must be completed by the quoter.			
11. SCHEDULE (Include applicable Federal, State and local taxes)						
ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	
0001	REQN. NO. 91110 /42543416 ITEM NAME: IPS MTG FILTER HOUSE ASSEMBLY IAW ATTACHED SPECIFI- CATION.	1	LT			
0002	REQN. NO. 91110 /42543425 ITEM NAME: RELEASE FOR MANUFACTURE	1	LT			
12. DISCOUNT FOR PROMPT PAYMENT		a. 10 CALENDAR DAYS (%)	b. 20 CALENDAR DAYS (%)	c. 30 CALENDAR DAYS (%)	d. CALENDAR DAYS NUMBER PERCENTAGE	
NOTE: Additional provisions and representations <input type="checkbox"/> are <input type="checkbox"/> are not attached						
13. NAME AND ADDRESS OF QUOTER			14. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION		15. DATE OF QUOTATION	
a. NAME OF QUOTER						
b. STREET ADDRESS			16. SIGNER			
c. COUNTY			a. NAME (Type or print)		b. TELEPHONE	
d. CITY			e. STATE		f. ZIP CODE	
			c. TITLE (Type or print)		NUMBER	

This Request for quotations (RFQ) covers the requirement for the design, manufacture and delivery of a Cooling Air Filter House/Plenum Assembly to be installed in a cooling air intake system for a Gas Turbine Test Site at Naval Surface Warfare Center Carderock Division (NSWCCD), Philadelphia, PA.

This RFQ is for a Firm Fixed-Price award using Simplified Acquisition procedures and the Government intends to make a single award to the offeror who submits the low price technically acceptable quotation in response to this RFQ. Technical acceptability shall be determined based on an evaluation of Technical Compliance and Corporate Experience.

Quotations will be rated as either Acceptable or Not Acceptable under each factor and, assigned an overall rating of Acceptable or Not Acceptable based on the rating in each factor. In order for a quotation to be assigned an overall rating of Acceptable, it must be assessed as Acceptable in both Technical Compliance and Corporate Experience.

In order to determine technical acceptability, offerors are required to submit as part of their quotation information under each of the technical factors, as discussed below.

EVALUATION CRITERIA

1. Technical Compliance: In this factor, offerors shall provide sufficient information to demonstrate that the proposed Cooling Air Filter House/Plenum Assembly will comply with the requirements set forth in the IPS LBTS Gas Turbine Generator Cooling Air Filter House/Plenum Specification. In particular, the offerors must provide the following information:

- a. Outlined drawing of the Cooling Air Filter House/Plenum Assembly as described in the specification showing typical lifting features and providing all envelope and gas path dimensions.
- b. Cross-sectional drawings to show typical details of all elements of the Cooling Air Filters.
- c. Laboratory test reports showing dust removal efficiency and dust holding capacity of proposed filter media when operating at or above the specified CFM/element and at the specified allowable clean and dirty pressure losses.
- d. Production Schedule.

2. Corporate Experience: In this factor, offerors shall provide information on their experience in the design, fabrication, and manufacture of Air Filter House Assemblies. In addition, the offeror must furnish information on their experience in the design, fabrication, and manufacture of the requirement, as well as its resources, equipment, and facilities that will be used during the production, and manufacturing of the assemblies to comply with the requirements contained in the Technical Specification.

Failure to submit adequate information on the above technical factors will result in rejection of the quotation. The Government intends to make an award based on the initial quotations received. Therefore, offerors are advised that their initial quotation should contain its best terms from both a technical and price standpoint. Understand all offers should include any expected detail changes as required under Section 6.0 Release for Manufacture.

This item will be delivered on a F.O.B Destination basis (that is, inclusive of all transportation or shipping costs) to the destination specified in Blocks 7a,b, c, d and e on page 1 of this RFQ in accordance with Clause 52.247-34 herein. Quotation submitted on other than a F.O.B Destination basis will be determined to be nonresponsive and may not be considered for award.

Attachment I – Technical Specification for Gas Turbine Generator Cooling
Air Filter House/Plenum Assembly (12 Pages)

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VENDOR:

SECTION F TIME OF DELIVERY

DELIVERIES SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS

ITEM	QUANTITY	DELIVERY REQUIRED
0001	1 LT	05-JAN-13
0002	1 LT	05-JAN-13

52.213-4 Terms and Conditions--Simplified Acquisitions (Other Than Commercial Items) (OCT 2004)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS) clauses that are incorporated by reference:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-3, Convict Labor (June 2003) (E.O. 11755).

(ii) 52.222-21, Prohibition of Segregated Facilities (Feb 1999) (E.O. 11246).

(iii) 52.222-26, Equal Opportunity (Apr 2002) (E.O. 11246).

(iv) 52.225-13, Restrictions on Certain Foreign Purchases (Dec 2003) (E.O.s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

(v) 52.233-3, Protest After Award (Aug 1996) (31 U.S.C. 3553).

(vi) 52.233-4, Applicable Law for Breach of Contract Claim (OCT 2004) (Pub. L. 108-77, 108-78)

(2) Listed below are additional clauses that apply:

(i) 252.204-7003, Control of Government Personnel Work Product (Apr 1992)

(ii) 52.232-1, Payments (Apr 1984).

(iii) 52.232-11, Extras (Apr 1984).

(iv) 52.233-1, Disputes (Jul 2002).

(v) 252.243-7001 Pricing of Contract Modifications (Dec 1991)

(vi) 52.244-6, Subcontracts for Commercial Items (Jul 2004).

(vii) 52.253-1, Computer Generated Forms (Jan 1991).

(b) The Contractor shall comply with the following FAR and DFARS clauses, incorporated by reference, unless the circumstances do not apply:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (Jun 2004) (E.O. 13126). (Applies to contracts for supplies exceeding the micro-purchase threshold.)

(ii) 52.222-20, Walsh-Healey Public Contracts Act (Dec 1996) (41 U.S.C. 35-45) (Applies to supply contracts over \$10,000 in the United States, Puerto Rico, or the U.S. Virgin Islands).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212) (Applies to contracts of \$25,000 or more).

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(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793). (Applies to contracts over \$10,000, unless the work is to be performed outside the United States by employees recruited outside the United States.) (For purposes of this clause, United States includes the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.)

(v) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212) (Applies to contracts of \$25,000 or more).

(vi) 52.222-41, Service Contract Act of 1965, As Amended (May 1989) (41 U.S.C. 351, et seq.) (Applies to service contracts over \$2,500 that are subject to the Service Contract Act and will be performed in the United States, District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, Johnston Island, Wake Island, or the outer continental shelf lands).

(vii) 52.223-5, Pollution Prevention and Right-to-Know Information (Aug 2003) (E.O. 13148) (Applies to services performed on Federal facilities).

(viii) 252.225-7001, Buy American Act and Balance of Payments Program (Apr 2003) (Applies to all contracts for supplies unless an exception is authorized by DFARS 225.1101(2) (i) through (iv)).

(ix) 252.225-7013, Duty-Free Entry (Apr 2003) (Applies to all contracts for supplies except for those supplies that will not enter the customs territory of the United States).

(x) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (Oct 2003). (Applies when the payment will be made by electronic funds transfer (EFT) and the payment office uses the Central Contractor Registration (CCR) database as its source of EFT information.)

(xi) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (May 1999). (Applies when the payment will be made by EFT and the payment office does not use the CCR database as its source of EFT information.)

(xii) 252.247-7023, Transportation of Supplies by Sea (May 2002) Alternate III (May 2002) (Applies when transporting any supplies by sea under this contract.)

(2) Listed below are additional clauses that may apply:

* (i) 52.204-7, Central Contractor Registration (Oct 2003) (Applies to all contracts unless an exception is authorized by FAR 4.1102(a).)

(ii) 252.204-7004, Alternate A (Nov 2003) (Applies if FAR 52.204-7 is applicable.)

(iii) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (July 1995) (Applies to contracts over \$25,000).

(iv) 52.211-5 Material Requirements (Aug 2000) (Applies to contracts for supplies that are not commercial items).

(v) 52.211-17, Delivery of Excess Quantities (Sept 1989) (Applies to fixed-price supplies).

(vi) 252.225-7002, Qualifying Country Sources as Subcontractors (Apr 2003) (Applies if the contract is subject to the DFARS clause 252.225-7001, Buy American Act and Balance of Payments Program (see (b) (1) (viii) above)).

(vii) 52.243-1, Changes--Fixed Price (Aug 1987) (Applies to fixed-price contracts for supplies).

must be registered in CCR-(WWW.CCR.GOV)

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(viii) 52.243-1, Changes--Fixed Price (Aug 1987) Alternate I (Apr 1984) (Applies to fixed price contracts for services, other than architect-engineer or other professional services, and no supplies are to be furnished).

(ix) 52.243-1, Changes--Fixed Price (Aug 1987) Alternate II (Apr 1984) (Applies to fixed price contracts for services (other than architect-engineer services, transportation, or research and development) and supplies are to be furnished).

(x) 52.243-1, Changes--Fixed Price (Aug 1987) Alternate V (Apr 1984) (Applies to fixed price contracts for research and development).

(xi) 52.247-29, F.o.b. Origin (Jun 1988) (Applies to supplies if delivery is f.o.b. origin).

(xii) 52.247-34, F.o.b. Destination (Nov 1991) (Applies to supplies if delivery is f.o.b. destination).

(xiii) 52.222-42, Statement of Equivalent Rates for Federal Hires (May 1989) (Applies if the contract amount is expected to be over \$2,500 and the contract is subject to the clause 52.222-41, "Service Contract Act of 1965, As Amended" (see (b) (1) (vi) above)).

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Part 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

This Statement is for Information Only:

It is not a Wage Determination

Employee Class	Monetary Wage--Fringe Benefits
_____	_____
_____	_____
_____	_____
_____	_____

(xiv) 52.246-11 Higher-Level Contract Quality Requirement (Feb 1999) (Applies to contracts when the contracting officer finds it is in the Governments interest to require that higher-level quality standards be maintained and such standards are selected and identified in the clause).

The Contractor shall comply with the higher-level quality standard selected below. [If more than one standard is listed, the offeror shall indicate its selection by checking the appropriate block.]

Title	Number	Date	Tailoring
* _____	_____	_____	_____
* _____	_____	_____	_____
* _____	_____	_____	_____
* _____	_____	_____	_____

[Contracting Officer insert the title, number (if any), date, and tailoring (if any) of the higher-level quality standards.]

(c) FAR 52.252-2, Clauses Incorporated by Reference (Feb 1998). This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will

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VENDOR:

make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

FAR clauses - <http://www.arnet.gov/far/>

DFARS clauses - <http://www.acq.osd.mil/dp/dars/dfars.html>

(d) Inspection/Acceptance. The Contractor shall tender for acceptance only those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its postacceptance rights--

(1) Within a reasonable period of time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(e) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence, such as acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(f) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges that the Contractor can demonstrate to the satisfaction of the Government, using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred that reasonably could have been avoided.

(g) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(h) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

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(End of clause)

52.232-36 Payment by Third Party (May 1999)

(a) General. The Contractor agrees to accept payments due under this contract, through payment by a third party in lieu of payment directly from the Government, in accordance with the terms of this clause. The third party and, if applicable, the particular Governmentwide commercial purchase card to be used are identified elsewhere in this contract.

(b) Contractor payment request. In accordance with those clauses of this contract that authorize the Contractor to submit invoices, contract financing requests, other payment requests, or as provided in other clauses providing for payment to the Contractor, the Contractor shall make such payment requests through a charge to the Government account with the third party, at the time and for the amount due in accordance with the terms of this contract.

(c) Payment. The Contractor and the third party shall agree that payments due under this contract shall be made upon submittal of payment requests to the third party in accordance with the terms and conditions of an agreement between the Contractor, the Contractor's financial agent (if any), and the third party and its agents (if any). No payment shall be due the Contractor until such agreement is made. Payments made or due by the third party under this clause are not payments made by the Government and are not subject to the Prompt Payment Act or any implementation thereof in this contract.

(d) Documentation. Documentation of each charge against the Government's account shall be provided to the Contracting Officer upon request.

(e) Assignment of claims. Notwithstanding any other provision of this contract, if any payment is made under this clause, then no payment under this contract shall be assigned under the provisions of the assignment of claims terms of this contract or the Assignment of Claims Act of 1940, as amended, 31 U.S.C. 3727, 41 U.S.C. 15.

(f) Other payment terms. The other payment terms of this contract shall govern the content and submission of payment requests. If any clause requires information or documents in or with the payment request, that is not provided in the third party agreement referenced in paragraph (c) of this clause, the Contractor shall obtain instructions from the Contracting Officer before submitting such a payment request.

(End of clause)

* Your quotation must include the following information:

Price list number and date

or

Cost breakdown by direct labor (list categories, hours and pay rates). In addition to the direct rates, provide the applicable indirect information (G&A), overhead, facilities capital cost of money (FCCM) and profit.

* all pricing data

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VENDOR:

or

Applicable General Services Administration (GSA) contract number.

If unable to quote FOB, Destination, please complete the following:

FOB Point _____

Estimated Shipping Charge _____

Business size:

Large _____ Small _____ Nonprofit _____

Cage Code _____

Tax Identification Number (TIN) _____

DUNNS _____

ELIGIBILITY REQUIREMENTS

All contractors and individuals doing business with the Federal Government must be registered at the Contractor Central Registration Database located at:
<http://ccr.dlsc.dla.mil/>.

ELECTRONIC DISTRIBUTION OF CONTRACT DOCUMENTS

All contract award and contract modification documents will be distributed electronically using the Navy Air Force Interface (NAFI) system. The contractor's copy will be provided in portable document format (pdf) as an attachment to an e-mail that will be sent to the contractor by the NAFI system. A pdf file may be accessed using Adobe Acrobat Reader software. This is a free software that may be downloaded at:

<http://www.adobe.com/products/acrobat/readstep.html>

Provide the following information that will be used to make electronic distribution for any resultant contract:

Name of Point of Contact to Receive
Distribution _____

Phone Number for Point of Contact _____

E-Mail Address for Receipt of Distribution _____

USE OF THE GOVERNMENTWIDE COMMERCIAL PURCHASE CARD

Will you accept the Governmentwide Commercial Purchase Card as a method of purchasing supplies and/or services.

Please complete pages 9 and 10

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VENDOR:

_____ Yes

_____ No

Will you accept the Governmentwide Commercial Purchase Card as a method of payment for your invoice.

_____ Yes

_____ No

DUTY FREE ENTRY

Will any materials being shipped to the Government require a duty-free entry certificate for foreign supplies.

_____ Yes

_____ No

If yes, please include dollar amount \$ _____

**Purchase Specification
For
Gas Turbine Generator Cooling Air Filter House / Plenum Assembly**

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1.0 Introduction

- 1.1 This specification establishes the requirements for the design, manufacture, and delivery of a Cooling Air Filter House / Plenum Assembly to be installed in a cooling air intake system for a Gas Turbine Test Site at the Naval Surface Warfare Center, Carderock Division, Ship Systems Engineering Station (NSWCCD-SSES), Philadelphia, PA.
- 1.2 The Cooling Air Filter House / Plenum shall be fabricated, assembled, and shipped in as complete a unit as possible.
- 1.3 The Cooling Air Filter described in this specification must be designed to be structurally and thermally adequate to withstand the lifting and handling, load conditions and operating conditions described in this specification.
- 1.4 The Cooling Air Filter House / Plenum Assembly is to be delivered to NSWCCD-SSES no later than 12 weeks after Date of Contract.

2.0 Scope

2.1 Equipment and Services to be provided by the Contractor:

- 2.1.1 The Contractor shall be responsible for delivery of each of the following to NSWCCD-SSES in Philadelphia (installation by others). Each item is to be in accordance with the specifications provided herein:

Item	Qty	Description
0001	1	A Two Section Filter House / Plenum Assembly, Including : Bird Screens, Filter Racks, Internal Foreign Objects Barrier (FOB) Screens, Instrumentation ports, and Two Discharge Ducts (One Per Section)
0002	1 Lot	Release for Manufacture Documentation (Section 6.0)

- 2.1.2 The Contractor shall be responsible for the design, procurement of materials, fabrication, cleaning, surface preparation, painting, packaging and shipping of all items included in this specification. The Contractor is responsible for the product in transit.
- 2.1.3 The design of structural steel shall be in accordance with the specification of the American Institute of Steel Construction, latest edition, except where modified by local government regulations or Government's special requirements specified herein. Modifications for local government regulations or Government's special requirements shall be made only if they exceed the requirements of the Codes.

- 2.1.4** The Cooling Air Filter House / Plenum Assembly shall have hardened lift points to allow lifting and movement. These lift points shall be designed where possible to lift through the system component center of gravity. Temporary shoring shall be designed, manufactured, and provided with the Cooling Air Filter to facilitate movement including installation. Where the integral strength of a component section will not allow free standing storage, storage stands shall be designed, manufactured and provided. All design drawings and hardware shall have centers of gravity calculated and clearly marked. Where the component sections have been made symmetrical, lift points shall be made on both sides of the mirroring section feature.
- 2.1.5** The Contractor shall be responsible for the accuracy of its designs and full conformance to the requirements presented in this specification. Approval of any drawings, calculations and/or tests by the Government shall not relieve the Contractor from these responsibilities.
- 2.1.6** Nothing in this specification shall relieve the Contractor of the responsibilities for performing, in addition to the requirements of this specification, such analyses which the Contractor considers necessary to insure that the design, material, and workmanship are satisfactory for the service intended, or as may be required by common usage and/or good practice.
- 2.1.7** The Contractor shall maintain all hereafter-specified data and records. These will be delivered to the Government after the work has been accepted.
- 2.1.8** The Contractor shall establish and maintain a system for the control of quality during manufacture and examination, which will insure that all components and assemblies furnished under this specification meet requirements hereinafter specified.
- 2.1.9** The Contractor shall provide all necessary and incidental labor, materials, tools, equipment and services which must be employed to satisfy the requirements stated in this specification.
- 2.1.10** The Contractor shall provide, for review and approval, all of the data requirements described in this specification, including the complete and detail drawings for all equipment and work under this specification.
- 2.1.11** The Contractor shall provide the Government and his agent access at all times to all places where work is being done under this specification. They shall have full access to facilities for unrestricted inspection of such work.

2.1.12 The Contractor shall fabricate (at his facility) and ship the Cooling Air Filter House / Plenum Assembly described below to the buyer at the location specified herein. The only remaining work required by the Government to install the filter house assembly shall be:

- Install the required air filters (procured separately)
- Install the required gaskets and fasteners at each flange
- Install the pressure sensing instruments at the instrumentation connections on the filter house provided by the Contractor
- Install electrical grounding cables, as required.
- Secure the Cooling Air Filter House / Plenum Assembly to its foundation

2.2 Equipment and Services to be provided by the Government:

2.2.1 The Government will unload at the site, store and erect all items furnished by this specification.

2.2.2 The Government will provide and install pressure-sensing instruments at the instrumentation connections in the Cooling Air Filter following erection.

2.2.3 The Government will provide grounding cables, as required, following erection.

2.2.4 The Government will install the foundation for the Cooling Air Filter House / Plenum Assembly.

2.2.5 The Government will install the fasteners that secure the assembly to the foundation.

3.0 Applicable Documents

3.1 The following specifications, standards, and codes, latest edition, form a part of this specification. The design of the items identified in this specification shall be in strict compliance with all applicable sections herein.

3.2 Referenced Specifications, Standards, and Codes

3.2.1 American Welding Society (AWS), Standards D1.1 "Structural Welding Code – Steel", D9.1 "Sheet Metal Welding Code", and D10.12 "Guide for Welding Mild Steel Pipe"

3.2.2 American Institute of Steel Construction, Inc. (AISC), ASD 9th Edition

3.2.3 American Iron and Steel Institute (AISI)

- 3.2.4** American Society for Testing and Materials (ASTM), Standards A36, A105, A106, A123, A176, A181, A240, A325, and A563
- 3.2.5** American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) Standard 52-76
- 3.2.6** American National Standards Institute (ANSI), Standards B1.20.1 "Pipe Threads, General Purpose (Inch)", B16.11 "Forged Fittings, Socket-Welding and Threaded", B16.5 "Steel Pipe Flanges and Flanged Fittings"
- 3.2.7** Steel Structures Painting Council (SSPC)
- 3.2.8** International Building Code, 2003
- 3.2.9** Department of Transportation (DOT), CFR 49
- 3.2.10** Occupational Safety and Health Agency (OSHA), Part 1910 "Standards Improvement (Miscellaneous Changes) For General Industry and Construction Standards"
- 3.2.11** Federal Specification TT-S 00230C

4.0 Technical Requirements

4.1 General

4.1.1 Site Conditions:

- 4.1.1.1** Location: Indoor
- 4.1.1.2** Outdoor Air Temperature Range: -5°F to 105°F
- 4.1.1.3** Indoor Air Temperature Range: 45°F to 105°F
- 4.1.1.4** Relative Humidity Range: 05% to 100% (outside air)
- 4.1.1.5** Altitude: Approx. 52 ft. above mean sea level

4.1.2 Design Load Conditions

- 4.1.2.1** Erection: Dead load plus seismic load.

4.1.2.2 Normal Operating: Dead load, plus dynamic load (live load) resulting from operating conditions specified in Section 4.1.3, plus seismic.

4.1.2.3 Allowable unit stresses shall be stipulated per Section 3.2.2, except where modified by local requirements.

4.1.3 Operating Conditions

4.1.3.1 The maximum inlet gas flow rate is 40 lbs/sec (20 lbs/sec each Section) at 100°F at 14.667 PSIA.

4.1.3.2 The filtered air, when using Pneumafil TMP 85-24 filter elements, shall meet the following quality requirements:

4.1.3.2.1 Solid material in the airstream shall not exceed 0.2 grains of solids per 1000 standard cubic feet of air.

4.1.3.2.2 Particulates greater than 10 microns in size shall not exceed 5% of the weight of all particulates in the filtered air stream.

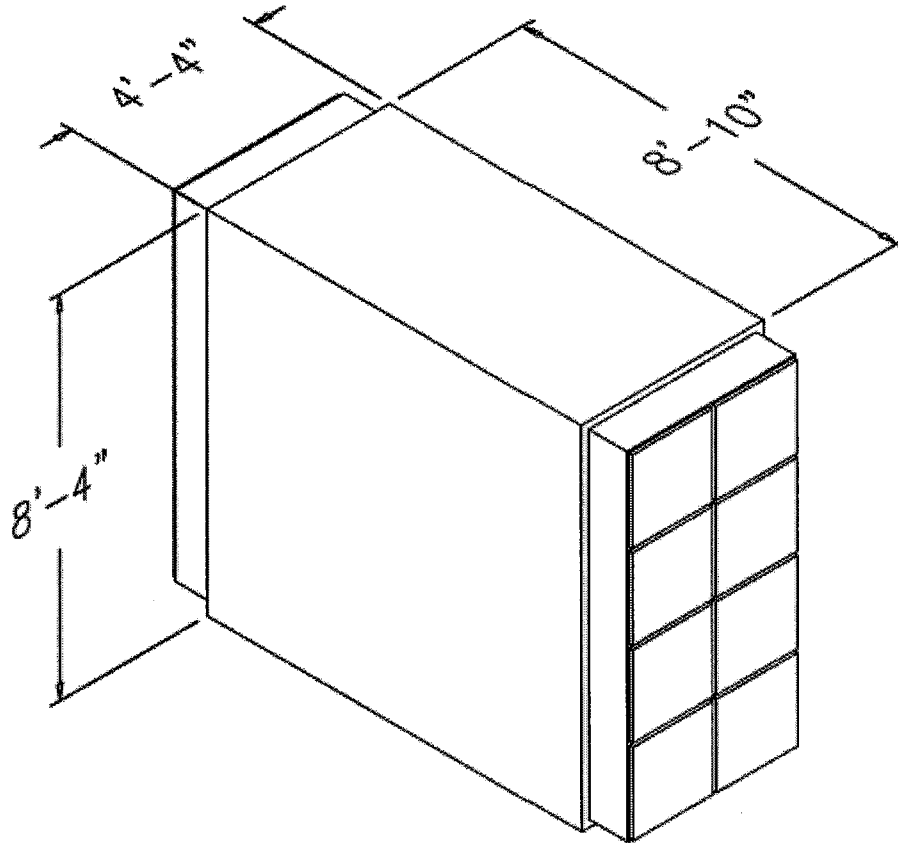
4.2 Arrangement

4.2.1 Cooling Air Filter Housing is to be constructed with two separated sections. Each section is to have a filter bank sufficient for filtering 20 lbs/sec of air at 100°F at 14.667PSIA.

4.2.1.1 The pressure loss through the bird screen and clean filter elements shall not exceed 0.35 inches W.G.

4.2.1.2 Sufficient filter surface shall be included in the installed filter elements to provide 2000 hours of service before the pressure loss through the bird screen and dirty filter elements exceeds 2.0 inches W.G.

4.2.2 The Cooling Air Filter House must be designed to fit within the allowable area as defined in Figure 1 below.



**Figure 1: Cooling Air Filter House Maximum Size
(Does Not Include 32" ID Discharge Ducts)**

- 4.2.3 Each Cooling Air Filter House Section shall have an independent discharge connection located on the bottom of the plenum as shown in Figure 2.

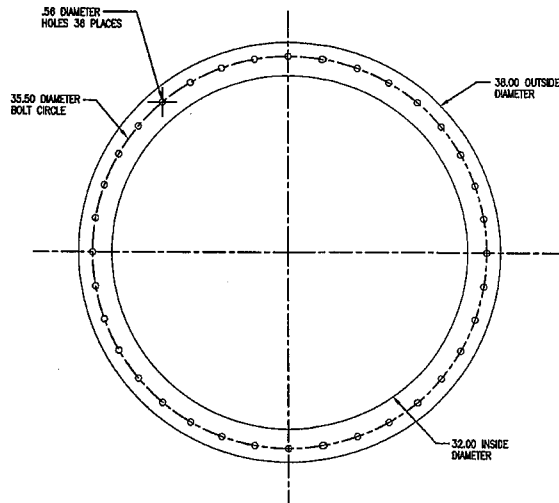


Figure 2: Cooling Air Filter House Discharge Flange Detail

- 4.2.4 Lift points (eyes) shall be provided to permit handling, loading, unloading, and erection.
- 4.2.5 The Cooling Air Filter shall have a sectionalized and detachable galvanized wire mesh screen to prevent birds, foreign objects and other particulate matter from entering or being carried over into the plenum and downstream component sections
- 4.2.6 The Cooling Air Filter shall have a removable FOB screen atop the entry to both 32" discharge connections. Filter Mesh is to be 1" x 1" with 1/8" diameter wire.
- 4.2.7 Mounting provisions are in Contractor scope, location to be provided (by Government) later.
- 4.2.8 The Cooling Air Filter is to use Pneumafil TMP 85-24 filter elements.
- 4.2.9 Two (2) pressure taps, one (1) per section, shall be provided as shown in Figure 3. Locations will be determined at design review.

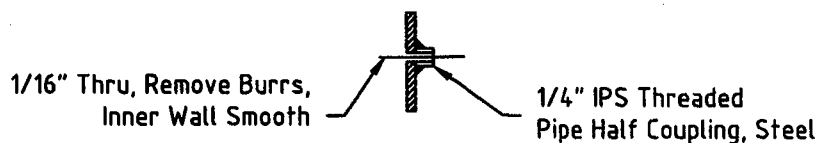


Figure 3: Pressure Sensing Connection Detail

4.3 Tolerances

4.3.1 Tolerances shall be in accordance with the following:

4.3.1.1 Flange Tolerances:

4.3.1.1.1 Flatness of flanges shall be held within a tolerance of $\pm 1/8$ inch. Contractor shall insure that flanges will not be distorted due to the torque of bolts.

4.3.1.1.2 Flanges shall maintain parallelism or perpendicularity, as applicable, within a total tolerance of $\pm 1/8$ inch.

4.3.1.1.3 Round Flanges shall maintain the required diameter within $\pm 1/8$ inch.

4.3.1.1.4 Location of all holes shall be held to a true position of $\pm 1/16$ -inch diameter circle.

4.4 Materials and Processes

4.4.1 Material for filter frames, retainers and screen shall be galvanized steel per ASTM A-123. Welding shall be in accordance with AWS D1.1. All exterior welds are seal welds.

4.4.2 All external welding shall be continuous. All internal non-continuous welded joints shall be fully caulked with sealant per Federal specification TTS 00230C (3.2.11 above), or equal, before painting.

4.4.3 Material for the plenum housing shall be ASTM A-36, 3/16" thick.

4.4.4 Gasket material shall be 1/4" thick, 70 shore A durometer, neoprene gaskets.

4.4.5 Surface Preparation and Painting

4.4.5.1 Carbon steel surfaces (interior and exterior) shall be cleaned in accordance with SSPC-SP6 (3.2.7 above), Commercial Blast Cleaning. Dust and blast products shall be removed from the surface of sandblasted steel by high-pressure air or vacuum cleaning.

4.4.5.2 Paint all Carbon Steel interior and exterior surfaces with one shop coat of Carbo-Zinc HS-11 (Green) paint, 3.0 to 5.0 mils dry film thickness.

- 4.4.5.3** Paint all Carbon Steel interiors with one finish coat 890 Epoxy Finish (Gloss Green #9351), 3.0 to 5.0 mils dry film thickness.

5.0 Technical Data

5.1 Drawings

Final, detail outline and section drawings are to be submitted and approved by the Government prior to proceeding with any fabrication work. These drawings are required to include materials, dimensions, tolerances, surface finishes (where applicable), welding details, instrument tap details, rigging features, weight and center of gravity data, flange details, bolting, and support details and loads. Review and comment of final drawings will be provided 14 days after receipt of the drawing package by the Government.

5.2 Calculations

Calculations for support reactions and the structural adequacy of the Cooling Air Filter are to be submitted and approved by the Government prior to proceeding with fabrication.

6.0 Release For Manufacture

- 6.1** The Government will provide a release for manufacture to the Contractor following approval of the final drawings and calculations by the Government. See paragraph 5.1 and 5.2 above.

7.0 Inspection and Testing

- 7.1** The Contractor shall notify the Government two weeks prior to the shipping date for the Cooling Air Filter House / Plenum Assembly. The Government reserves the right to conduct an in-plant inspection of the pieces prior to packaging for shipment.

8.0 Shipping

8.1 Packaging

- 8.1.1** Equipment shall be packed for shipping in a manner that will ensure acceptance and safe delivery at destination. Supplier is responsible for damage during shipment.

8.1.2 Each package shall be marked with the Contract Number, Contract Item Number and Purchase Specification Number TS050-19.

8.1.3 Shipping Address: Naval Surface Warfare Center
Carderock Division
Ship Systems Engineering Station
Receiving Code 3361, Bldg. 542
Philadelphia Naval Business Center
Philadelphia, PA 19112-1403
Attn: Mr. Howard Feinstein, Code 9112
Phone (215) 897-8895